

## ABSTRACT OF THE DISCLOSURE

Provided are a production process for a carboxylic amide compound in which a color tone stability after the passage of time is good and in order to provide

5 production processes for betaine, a quaternary ammonium salt and an amine salt using the above carboxylic amide compound, a production process for carboxylic amide and derivatives thereof characterized by reacting higher fatty acid or an ester thereof represented by the

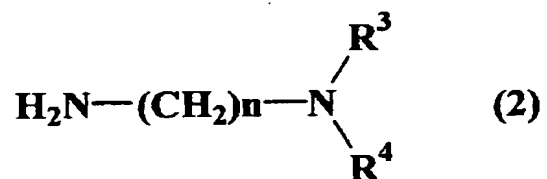
10 following Formula (1) with diamine represented by the following Formula (2) under the presence of an organic phosphonic acid compound represented by the following Formula (3) or adding the organic phosphonic acid compound after the reaction or after removing excess

15 diamine after the reaction:

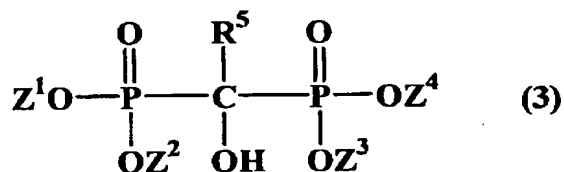


in Formula (1) described above,  $R^1$  represents a linear or branched alkyl group, an alkenyl group or a hydroxyalkyl group having 5 to 23 carbon atoms, and  $R^2$  represents a

20 hydrogen atom, a linear or branched alkyl group having 1 to 4 carbon atoms or a residue obtained by removing one acyloxy group from glyceride;



in Formula (2) described above,  $\text{R}^3$  and  $\text{R}^4$  represent an alkyl group having 1 to 4 carbon atoms and may be the same or different, and  $n$  represents a number of 2 to 4;



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in Formula (3) described above,  $\text{R}^5$  represents a hydrogen atom or a lower alkyl group having 1 to 3 carbon atoms, and  $\text{Z}^1$ ,  $\text{Z}^2$ ,  $\text{Z}^3$  and  $\text{Z}^4$  each represent independently a hydrogen atom or an alkaline metal atom.

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